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Doug and Brett Robertson

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PROTECT YOUR WATER

The use of portable windbreaks and shelters, as well as swath grazing and other alternative winter feeding techniques, are all management options that can be used to protect water sources. Cattle wintering sites which are located next to a watercourse can have a negative impact on the quality of surface water due to runoff. This runoff, which tends to be nutrient rich, can also potentially decrease groundwater quality by leaching down through the overlying soil. Feeding in the field not only helps spread nutrients around, it also helps avoid water contamination.

Running a Ranch These Days

A few miles Northwest of Cut Knife you'll find the headquarters of Scallywag Farms, where Doug Robertson and his son Brett run cows for a living. Being strictly a cow/calf and backgrounder operation, they have realized the importance of knowing their costs and studying the markets. There are no grain acres to help hide the costs here!

Similar to many other ranches, the cow herd at the Robertson operation has been expanding rapidly the past few years. Their number of mother cows have doubled in five years - they will calve over 700 head this spring. Calving currently starts in early April.

Rapid expansion has had quite an effect on the workings of the operation. They have had to rent pasture where it is available, and as a result have summer herds spread out over many miles. This past summer, they had 15 pastures to check every week, in groups ranging from 30-170 head. They would prefer to combine the herds into larger groups for better grazing management and more efficient use of time for checking, treating, and moving cattle.

Despite the land base challenge, the family is able to use something they enjoy to their advantage. Many of the pastures have no handling facilities, and often their cattle moves are down unfenced roads. All cattle work is done on horseback. Using horses and a low-stress approach allows them to check, move, and treat cattle where it would not be possible with other methods.

Brett says that one of their focuses is to "get more out of the grass". As much as possible, they like to graze in bigger groups and move cattle frequently. This allows them to get a moderate and even graze across the whole pasture without overgrazing certain spots. One idea that they have found helpful is to move the herd according to the readiness of the next paddock, rather than focusing on the paddock the cattle are in.

Using these methods has also helped them to extend the grazing season substantially and reduce their winter feed costs.

Labor efficiency is key on this ranch, as they often feed and care for over 1,500 head. The bulk of the labor is supplied by just three people: Doug, Brett, and Brett's fiancée Jacquie. They also acknowledge the help of friends and neighbors at certain times such as branding and fall roundup. They try to live up to the motto Brett got from a former 4-H leader: "The cows should work for you, not the other way around."

The traditional corral facilities for wintering the herd have obviously been outgrown, so the Robertsons have taken advantage of more extensive wintering techniques for the cow herd. The cows spend the winter out on pasture and stubble fields and are fed a silage-based ration. "Swathgrazing is a good way to go if the weather co-operates", says Brett. "We saved about $7,000 in 24 days this winter." The cows are supplied shelter using portable windbreaks. The windbreaks have also been a great tool to help spread the manure around and reduce bedding requirements.

Recognizing the importance of optimizing grazing management, Brett is interested in staring a grazing club in the local area. These clubs are organized and operated by the producers, who bring in speakers, gather information on various topics and hold field tours. Much of the value in these clubs is from the producers sharing their own experiences.

Although they try to pay close attention to the financial part of the business, the Robertsons recognize that this is not a high-margin industry. They get satisfaction from the social and natural aspects of ranching. "You have to love it; it's as much a lifestyle as a business."

Off-Site Watering – Make $ense?

by Jeremy Brown, PAg
Range Agrologist
Saskatchewan Watershed Authority

If we assume that all producers are in agreement on the animal health and water quality benefits to providing water in a trough, what are some other considerations?

Keep in mind that it is not always necessary to fence the water source off completely. This means that livestock can still go to the source (river, stream, creek, lake, dugout, etc.) in the event that the trough goes dry. In most cases, they will choose clean water with solid footing (at the trough) over tromping in the mud (at the source).

So, what are the economics of pumping water? Can we recover the costs associated with this practice? How can available funding grants help?

Research has shown that cattle getting clean water in a trough can gain anywhere from 3%-20% better than those drinking directly from the source. This seems to be due to the fact that the clean water is more palatable, so the animals drink more (and, interestingly, drink faster). The result of higher water intakes is more time spent grazing and higher weight gains.

Let's look at an example and consider the cash costs and benefits of providing water in a trough:

Example Off-Site Watering Budget

Extra Costs:	
Solar Watering System (including trough)	$2,000.00
Less: Farm Stewardship Program Funding (50%)	-$1,000.00
Less: SaskPower Grant (50%)	-$500.00
Producer Cost:	**$500.00**
Extra Income:	
100 head x 0.10 lb/day x $1/lb	**$10.00/day**
Days to Recover Costs: ($500/$10 per day)	**50 days**

Assumptions:

- A 100 head cow-calf operation, summer grazing five months (150 days) a year.
- When provided water in a trough, calves gain 5% (0.10 lb/day) extra.
- Remote solar watering system (including battery, trough) costing $2,000.
- Weaned calves selling for $1.00/lb.

In this example, it takes less than two months to pay for the capital cost of the system. After the first grazing season, the economic benefit from the extra calf gains alone equals $1500 per year. Now add in the animal health and environmental benefits…does off-site watering make sense in your situation?

Using Cover Crops When Establishing Forages

By Dave O'Bertos, PAg
Agrologist
Ducks Unlimited Canada

Cover crops, companion crops or nurse crops are all different names given to the same thing: annual crops that are seeded together with forages and are usually harvested that same year. Even though most producers I know use cover crops when seeding their forages, there has always been much debate on whether they actually benefit or deter good forage establishment. In my opinion it all depends on how you use them, as there are both advantages and disadvantages to their use.

Cover crops have the potential to compete with the small forage seedlings for moisture, light and nutrients. This competition can reduce the vigor and establishment of the forages and can seriously affect the forage production in the following years. On the other hand, cover crops can provide protection to the establishing forage seedlings from the heat, wind and water action. The cover crop can also suppress weeds and provide a source of livestock feed or revenue during the forage establishment year.

The key is understanding that your goal is to establish a good forage stand, not a bumper cover crop.

One of the first rules when using a cover crop is to **reduce the rate of the cover crop to ¼ to ½ of normal**. I prefer to use oats as the cover crop and usually seed them at about 25 lbs/acre. I've experimented with many different rates and this rate appears to provide the best results, leaving enough room between plants for the forage seedlings and enough cover crop production to yield a good cut of

greenfeed or silage. I've found that even this rate of oats can be almost too high if seeding into summerfallow due to the tremendous tillering that can occur in a normal moisture year.

A recent study by Saskatchewan Agriculture and Food, Agriculture and Agri-Food Canada and the Saskatchewan Forage Council showed that decreasing the cover crop seeding rates did not proportionally decrease the green feed yields due to the tremendous tillering capacity of the oats and barley.

Green Feed Yield (lbs/ac)				
Seeding Rate	**2000**	**2001**	**2002**	**2003**
Oats ½ bu/ac	7122	5819	4618	6483
Oats 1 bu/ac	7888	7016	4682	6925
Oats 3 bu/ac	9326	9533	5700	8759
Barley ½ bu/ac	8431	7975	4295	8272
Barly 1 bu/ac	8942	7859	4115	9900
Barley 2 bu/ac	9092	8458	3901	10216

A second important rule to follow when using cover crops with your forage establishment is to **remove the cover crop as soon as possible**, which usually means harvesting it for greenfeed or silage. By this time the cover crop has already done its job by protecting the forage seedling from the heat and wind, and removing the cover crop will usually allow the forage seedlings at least another month to grow on their own. When cutting the cover crop try to leave tall stubble which will still provide protection to the forage seedlings and also act as a snow trap.

When selecting the cover crop you want to use, you should try to choose the least competitive type of crop. Oats is one of the least competitive cover crops, followed by wheat and barley, with canola being one of the most competitive. I would not recommend using fertilizer when growing a cover crop with forages as the cover crops will benefit more from the increased fertility, which will make them much more competitive.

Producers often have problems seeding forage grasses due to the light weight and physical characteristics of the seeds, which can often cause lodging problems in the seed box or tank. Another advantage of using a cover crop is that when you mix it together with your forage seed it acts as a carrier and allows the mixture to easily flow through your seeding equipment without bridging. If you do mix the cover crop and forage seed together you still have to seed this mixture at the optimum depth for the forage seed, which is between ½ to ¾ inches deep. Seeding too deep to get to moisture is probably one of the most common reasons for forage establishment failure.

To sum up, the use of cover crops when establishing a forage stand can be beneficial or detrimental to the forage depending on how the producer uses the cover crop. If the producer follows a few important rules, a cover crop can help "nurse" the forage seedlings through the establishment year while still providing quality livestock feed.

Funding Available for Many On-Farm Projects

By Dave Whitehead, PAg
PCAB Farm Stewardship Advisor

Did you know the Canada-Saskatchewan Farm Stewardship Program will pay at least 30 percent of the capital costs of projects initiated under an approved Environmental Farm Plan? The financial incentive limit is $50,000 per producer and the administrative conclusion of the program is March 31st, 2008.

There are 50 percent equity incentives as well. Should you use 'sweat equity' as part of your contribution to the project, the rebate to your cash costs could actually be higher than 50 percent.

There are 30 Beneficial Management Practices under which you may apply for funding from the Farm Stewardship Program. Whether you want to purchase an "auto steer" unit, cross-fence marginal land for pasture, move livestock wintering facilities, or properly cap an old well, I can be a resource person to you as you develop your proposal. The above examples are but a sampling of projects that benefit both you and the environment, and can be cost-recovered between 30 to 50 percent.

You first need to complete an Environmental Farm Plan. The certificate you receive has enduring value and the workshop process will encourage you to think about environmental concerns on your land.

Occasionally, your farm improvements may also qualify for funding support through the Canada-Saskatchewan Water Supply Expansion Program. This is an added opportunity if, for example, you are contemplating installing a shallow pipeline.

For those of you who wish to contact me, please call or fax to arrange an on-farm or office meeting. I would also be happy to provide a referral to other technical resource people who can help you prepare a Farm Stewardship Program application.

Good Farming!

Dave Whitehead

Phone: (306) 445-6849
Cell: (306) 441-5708
Fax: (306) 445-4200
email: dklwhitehead@sasktel.net

Leafy Spurge - The Worst of the Worst?

By Glenn Barclay, PAg
Forage Development Specialist
Saskatchewan Agriculture and Food

Weed infestations in pastures can produce serious economic losses. Many of these problems start out as a small clump of weeds or a single plant. A shrewd pasture manager is always vigilant to identify suspicious looking plants in their pasture. One of the biggest threats to lost production in pastures in the North West is leafy spurge. This weed may already be in your pasture and you may have overlooked the threat, or perhaps not even realized what the weed looks like. A leafy spurge infestation will decrease grass production and eventually will make a pasture unusable. United States researchers found a leafy spurge canopy cover of over 60% resulted in zero forage utilization by cattle.

The milky juice of leafy spurge makes it inconsumable by cattle and horses, although sheep and goats can eat the plant without harmful effects. The stems are erect (to 1 meter high), tough and woody. Flowers are greenish-yellow and inconspicuous, resting above a two-leaf-like, yellow-green bract. Leafy spurge is a perennial that spreads by seeds or by an extensive underground root system. When the seed pods dry out, they explode and eject the seeds up to five meters. Seeds can survive in the soil for at least eight years. These traits make it an extremely difficult weed to eradicate and, in many people's opinion, the worst pasture weed to deal with.

As with all noxious weeds, identifying where all leafy spurge infestations have established themselves in your pasture is the first step. Containing the infestation and eventually eliminating the weed is the ultimate goal. Small isolated patches can be controlled easier than large patches and should be the first point of attack. Keeping records on control methods and mapping infestations will determine the progress you are making. If you notice leafy spurge on a neighbour's property, encourage them to take action against the weed. Weed infestations can decrease property value or the amount of rent that can be charged.

Many rural municipalities have weed inspectors who are willing to assist you. They can help identify weeds and give you advice on control.

The website for Saskatchewan Agriculture and Food (http://www.agr.gov.sk.ca) can also help. You can use the search function to find three links that will be useful to you. The **Guide to Crop Protection** has a section entitled "Special Weed Problems" that outlines chemical control options for leafy spurge. The **Weed Identification Guide**, meanwhile, has colour photos and descriptions that can help you confirm a plant's identity.

The **Noxious Weed Program** was started in 1999 to stop the spread of leafy spurge, scentless chamomile and other weeds. The program promotes integrated weed control, which is a combination of non-conflicting control methods. Methods such as physical control (manual pulling out of weeds or mowing), chemical control (the use of herbicides), biological control (the use of insects to suppress weeds) and ecological control (the use of desirable competitive species) are all options that can be used separately or in an integrated program.

Technical assistance is available through the Provincial Council of ADD Board's invasive weed co-coordinators: Harvey Anderson (serving the west side of the province) at (306) 933-7695 and Nancy Gray (serving the east side of the province) at (306) 787-3115. Saskatchewan Agriculture and Food's Livestock Development Branch has seven Forage Development Specialists in regional offices across the Province who assist with land management issues. You can contact me at the North Battleford office at 446-7650 for any additional technical information.

The North West Environmental Stewardship Project participating partners:

Saskatchewan Watershed Authority
Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada
Western Applied Research Corporation
Saskatchewan Agriculture and Food
Saskatchewan Soil Conservation Association
Ducks Unlimited Canada

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For more information, contact:
Jeremy Brown, PAg
Range Agrologist
Saskatchewan Watershed Authority
402 Royal Bank Tower
1102 - 101st Street
North Battleford, SK S9A 0Z5

Phone: (306) 446-7460
Fax: (306) 446-7461
Cell: (306) 441-0744
jeremy.brown@swa.ca

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